

# MEDICINE AND EUGENICS\* ✓

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THE name which this lectureship commemorates and the distinguished records of its previous holders are, to the newly elect, a clear index of responsibility. It is, I take it, intended that the lecture should provide not so much an annual reminder of Galton and his work—for such can scarcely be needed—as an annual stimulus towards those objectives of which his prevision was the richest legacy to this *Society*. Now, although I have long been a member of the *Society* and for a much longer period interested in eugenics, my own contributions to that subject have, I regret to say, been negligible. I must presume, however, that in the person of the physician your Committee recognize a student of man and his needs, and in the physician who is also a teacher one who must, both practically and ideally, desire to turn the thoughts of those whom he teaches to what may be styled the ultimate aims and methods "for the preservation of health and the prevention of disease in individuals and communities.

The science of medicine and the science of eugenics are both applied sciences. Their aims are in many respects identical. In the course of a conversation with a critical friend I was recently asked what I considered the primary goal of medicine to be. As an active clinical physician concerned with diagnosis, the teaching of signs and symptoms, and the mending of individual lives, he suspected, perhaps, that I might reply "the curing of disease when possible and the relief of suffering when cure is out of reach," or words to that effect. I replied in effect, "the preservation of and the planning for the greatest possible health, happiness and efficiency for the greatest possible number by prophylactic measures, including eugenics and social reorganization." If this definition of the goal

of medicine be acceptable, then medicine may be considered as a sister science, with executive functions, to the science of eugenics, which Galton defined as "the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally." We have been reminded more than once recently that the scope of eugenics includes the study of environmental as well as heritable factors. The same is clearly true of medicine. I believe it would be fair to say, however, that medicine in the past has paid too little attention to inheritance, and eugenics too little attention to environment, and that both in the near future will have to invite a more active public interest in the contributions both of nature and of nurture to the good and the bad in all our racial qualities.

## *Preventive Medicine*

Curative and palliative medicine, although we must continue to ply them with all the earnestness and skill which our science and humanity may command, must now and henceforward be considered of secondary importance when examined in conjunction with preventive medicine. Of preventive medicine it clearly remains for us to build a more exalted and efficient structure. To its earlier beginnings with sanitary laws, pure water supplies, and the isolation of acute infectious disease notable additions have been made. By a variety of methods tuberculosis and venereal disease, the two great infectious scourges, are coming perceptibly and steadily under control. Factory Acts, improved conditions of labour and housing and health insurance—additional measures bearing on environmental improvement—all lend their quota. Ante-natal care and child welfare are now making their contribution. None of these, however, excepting the last

\* The Galton Lecture delivered before the *Eugenics Society* on February 16th, 1938.

two and these only in a limited and not always a far-seeing way, take cognizance of the basic human material to be encouraged and protected. None of them are concerned essentially with the production of sound stock or with the problem of what should be regarded as the optimum quality and quantity of man for given conditions of environment, occupation and productivity.

Of late we have been plied with propaganda on behalf of a national health campaign, a movement largely concerned with the improvement of physique by provision of better opportunities for games and organized drill, a movement with the undoubted merit of contributing to the elevation of health standards but launched without a proper investigation of the limits of improvement possible by these means in undernourished, ill-housed or overworked communities and in individuals of poor pedigree. There must be many thousands in this country whom this and kindred hygienic movements will scarcely touch, because defects of one type and another, both inherited and acquired, have put them beyond the scope of the most skilled remedial exercise or games. I have paused to wonder whether the results for the nation might not be better if the same expenditure of money and time and energy to be devoted to instruction in health by physical culture were diverted to instruction in health by family culture. It must have been disappointing to many here that, among all the speeches and press commentaries which announced the launching of this campaign, scarcely a word was said about the importance to the community and the state of those foundations of health which only a healthy stock can furnish. I had myself hoped that a fuller appreciation of the potentialities of eugenics had by now penetrated to high places.

### *Medicine, Eugenics and Sociology*

Now it is clearly a function of the medical profession to advise the politicians in the matter of planning for a healthier community. Of this there is a growing recognition. In the next decade or two, if the politicians will keep us out of wars, and, let

us hope, will translate to social services and reconstruction some of the vast sums at present expended upon armaments, we may expect new gains in health and physique from nutritional reforms, including adequate milk supplies; from healthier herds and the pasteurization of milk; from further housing improvements; and from other comparable measures now brought within the purview of state medicine. But there will still remain a more fundamental lesson for statesmen, for communities and for individuals—the lesson proclaiming the importance of pedigree and pride of pedigree and the importance of encouraging an optimum fertility rate.

The contributions which eugenic planning might make to national life cannot much longer be delayed or obscured. With the preliminaries to such planning eugenists have long been concerned, but the doctors, with their multitudinous problems and embarrassments, have, I fear, been too busy for the most part to be bothered. Scientific and humane planning for national health and efficiency are, or should be, in the hands of the three great applied sciences—medicine, eugenics and sociology. The last two know their objectives more or less, but are still emerging from the theoretical, academic stage of their development. The first, I regret to say, is so taken up with urgent practical affairs that it has scarcely found time to consider what its true objectives are. Between the three there is at present no true co-operation. Whether for the collection of essential information, for advice or for action, the doctor is, by reason of his direct contacts, in better circumstance than either the eugenicist or the sociologist. Individually, however, he is harassed, and collectively his profession lacks cohesion and a policy, lacks the necessary vision and organization for an effective pooling and interpretation and translation into action of the knowledge which it constantly accumulates. Nor has medicine yet come to a proper realization of the influence which it might exert for the common weal, whether by educational programmes or direct and informed persuasion or conversion of those who govern us.

### *The Neglect of Eugenics by the Medical Profession*

My life has brought me in daily contact with doctors of varied types, ages and modes of activity, and with innumerable medical students, but, although all of these are permeated from an early stage of the practical value of family histories in their diagnostic and prognostic assessments, it is rare to meet among them a man with even the rudiments of genetics or more than a very superficial interest in the prospect of race-betterment by genetic education or legislation. The possibilities of race-betterment by other methods of social reorganization also receive too cursory a consideration at all stages of the doctor's career.

The membership of the *Eugenics Society* is approximately 650. Of this number only one-fifth are medical men. The proportion would surely be much higher and the total membership greatly increased by an accession of medical members. Can large and effective policies ever come to birth at the behest of the *Eugenics Society* without such an accession? Would not a programme to secure the fuller co-operation of medicine be more effective than any propaganda devoted to awakening interest in lay audiences? Can such co-operation and the spread of interest derived therefrom a really promising avenue to large policy might surely then derive from a triple alliance between the great applied sciences I have already named, between medicine, eugenics and sociology.

And so I have asked myself whether it might be possible so to infect such a large heterogeneous and conservative body of doctors of this country with enthusiasm for race-betterment, both by improved environment and nutrition and improved living, that such an effective alliance might in fact, come into being. The full participation of the medical profession would be essential as it would necessarily provide the information bureau and, in part, the motive of such an alliance.

Being asked myself this question I next set myself the task of considering a pro-

gramme having this end in view. If here and there my hopes seem remote from realization and my remarks have the savour of idealism rather than practical politics, please do not condemn me too quickly. At heart I am a cautious person and my problems are approached as a rule, I believe, judiciously. But there are times when I grow impatient with the lack of active idealism among those scientific and social and political workers whose concern is, or should be, the improvement of man's lot. There are too many ills which we know how to prevent but are not as yet preventing.

### *An Educational Programme*

The preliminaries to our utopian programme must, I conclude, be educational. Compulsion and the proper pursuit and application of knowledge cannot be reconciled in the democratic state. Education must begin with the student, but must simultaneously, if in different form, be extended to the profession as a whole. In either case the education must be of a kind to produce educators, for the doctor of the future, as I envisage him, will far more than heretofore bring his benefits by instruction and precept. His name implies that he is a teacher and such he must become. From most diseases in which recovery is possible, recovery occurs spontaneously; some are only recoverable with the help of the doctor and the nurse; a few require the help of specific remedies or surgical intervention. Health, however, can be taught, although only a limited number of diseases can in the strict sense be cured. The medical man, while retaining his privileged position as comforter and healer and in many emergencies as a saver of life and limb, must discover a greater privilege in teaching individuals, municipalities and governments that many forms of chronic disease, disability and mental and physical ill-health could be prevented, and that we have as clear an appreciation of how to prevent them as we have in the case of many acute infections now becoming rare in civilized communities. If the doctor, who is already accepted as a servant and, in some degree, as an instructor of the people, is

enabled in course of time to state authoritatively that certain eugenic principles are not only sound but practicable, he will be given a hearing not only by his patients but also by statesmen—a hearing which non-medical eugenists, often far better informed but lacking the doctor's personal contacts and sphere of influence, have sought in vain.

The *Eugenics Society*, as is well known, was formerly called the Eugenics Education Society, but its educational achievement was limited, since only a small section of the community, already anxious to be educated, came forward for the purpose. Although the *Society* has greatly prospered and grown and has frequently stirred new interest in recent years, even in the political field, I believe the criticism would still hold that, for all its good endeavours and high scientific standards, it is in the main a *Society* of the elect, and gains influence slowly with the general public, the medical profession and the councils of state. This need not give us cause for despondency, but only for revision of policy.

Now the public, in matters affecting the health of themselves or their children, are accustomed to appeal to the family doctor. The family doctor, at present, is but rarely prepared to give either spontaneous or elicited advice in matters connected with eugenic prognosis or with the size or spacing of families, and is seldom even asked to examine and report upon the health of intending partners in a marriage. He has not been educated to consider these things as important or coming within the natural sphere of his activities. He could be so taught.

Legislators, in matters affecting the health of the community, are apt to approach distinguished men in the profession such as our President, the Presidents of the Royal Colleges, or the Secretary of the Medical Research Council. Until recently these distinguished men have not been prepared, not always qualified, to advise in matters so fundamental as sterilization of the unfit, its possible advantages and disadvantages; taxation relief for the encouragement of healthy parenthood; the significance of population fluctuations; the various causes of decline in

physical standards; the origins of mental defect, and so forth. They had not been taught to direct their thoughts along such channels. They could be so taught and are in fact, as we now know, learning to do so. The point which I wish to make is this: that it is from the doctors, and not from the eugenists or sociologists, that both private and public advice in these matters is apt to be and ideally should still be sought.

In our British type of polity, which in the recent past has shown itself quite unwilling to consider prohibition laws, we have nevertheless witnessed an amazing and rapid diminution in alcoholism within one generation as a result of education, improved social conditions and minor legislation. For many of the same reasons which compelled a distrust of prohibition, it is evident that the country would be unwilling to consider compulsory sterilization or compulsory examination for marriage certification, after a fashion tolerated or possible in a dictator-ridden state. And yet I am convinced that an educational campaign in connexion with the problems and practice of eugenics and supported by the medical profession would eventually be welcomed with enthusiasm in all classes, provided the ground were properly prepared and policies wisely framed.

Never, perhaps, were the common people more anxious to be kept informed in respect of the fundamental things affecting the health or more ready to accept advice with scientific backing. It is a sad commentary on our system that they should have to content themselves so frequently with quackery, doubtful literature, and the advertisements and hoardings. I have myself noticed, as others must have done, the increasing willingness on the part of men and women in all classes and among student groups to discuss matters generally shunned under an earlier and more cramped régime, an increasing desire to know what is physiologically right in matters affecting their married happiness and that of their offspring or their future responsibilities as citizens. With a cautious and insufficiently instructed medical profession it often befalls that they must seek their answers in books of uncertain value or at the hands of

psychiatrists or other specialists, who may and often do give valuable help, but too few of whom at present find time to correct their psychology or specialism with a true physicianly perspective. With removal of the restrictions imposed by religious thought and by the silence of Victorian parents there is a general eagerness to be instructed in matters biological, an eagerness which demands healthy and informed satisfaction.

### *The Individual Doctor*

Before we proceed to consider our educational programme for the medical student and the doctor, who in turn are to become the educators of the public and of the legislators, we would do well to ask ourselves how far the critical or hesitant doctor may be justified in his doubts or misgivings about the prospects of any effective co-operation on his part in a national eugenic programme. Our President pointed out quite recently how medicine has tended to strike further and further at the root of things, turning its attention by degrees from the individual patient to the control of infection at its source, or to measures for increasing resistance to it; and thence to other methods essentially preventive and latterly in particular to infant and pre-natal welfare. Now, as he has reminded us, we must needs go farther still, planning our actions even more radically. Most of us here would endorse his contention that eugenics might become "the soundest and by far the most profitable form of preventive medicine." So we believe, but can we persuade the profession of the reliability of our evidence and the efficacy of our remedies? In larger issues such as the control of population and the social problem group we must admit that we are still exploring and seeking evidence. These are beyond the scope of immediate individual or collective solution. Here for the moment we are rather concerned with problems of domestic concern and so more readily to be understood and handled. Let us assume that there is no longer any need to detach medical opinion from the vulgar idea of human stud-farms and compulsory sterilization, neither of which measures has been advocated by this *Society*.

Let us assume also that the necessary information in regard to negative eugenics—including measures of segregation, voluntary sterilization and instructed contraception—could without great difficulty be distributed, albeit without conveying extravagant ideas as to the rate of betterment likely to result therefrom. Such measures, it is agreed, must be mainly directed against the propagation of mental defect and a limited number of rare physical abnormalities and heritable nervous and blood diseases. At this point the practising doctor will still be wondering where his duty and effectiveness begin, for the cases of hæmophilia and Huntington's chorea and such rarities seen by him in a lifetime could be counted on one hand, his total of mental defectives in a year would not be very significant, and in any case adjudication for these would involve consultative advice and action by a public body.

Ask him, however, to keep a record not only of his genetic rarities, of his mental defectives, epileptics, alcoholics, and manic depressives, but also of his very considerable body of physical defectives, the puny and ailing and undersized, and of the unhappy, the unmarried and the childless and the workless for these reasons, and of the frail and nervous children traceable to known dysgenic marriages and homes. Ask him how often he has discussed with patients or parents the undesirability of marriage or of children or of additional children in the presence of certain types of heritable defect or in certain cases of consanguinity. Ask him if he has considered the poor physical and nervous histories of many of the near relatives of the insane. Ask him how often, when advised of an impending marriage in the family of any one of his patients, he has recommended the medical examination of the intending partners or discreet inquiry into family history. Ask him how often he has been at pains to encourage a healthy married couple, practising contraception for inadequate reasons, to improve their prospects of health and happy life together and to serve their race by bearing children, or the timid with one healthy child to have another. Ask him how often he has advised his poor

and anæmic and debilitated patients harassed by too many or too weakly children to prevent and how to prevent or to space the arrival of others. Ask him whether he has openly discussed such actions with his colleagues or sought information in connexion with these problems at medical meetings or elsewhere. Then, I believe, but always with some notable exceptions, you will find that the eugenic conscience, through lack of knowledge and encouragement, is scarcely as yet awake in the profession, but also—for doctors are a willing and devoted, although often a tired and troubled fraternity—that the conscience would be very glad to be stirred and could long since have been stirred had proper provision been made in the medical curriculum for such prophylactic studies or had a proper interest been cultivated by frequent planned discussion in the friendly circle of the local medical society.

The problem of time in a busy doctor's life is a very real one, but as the individual practitioner is relieved by degrees, by means of public clinics and extending hospital services, of certain of his tasks, there is a real opportunity for the development of new interests and fresh lines of activity in connexion with many enduring physical and psychological problems of daily practice. In his occasions for eugenic judgment a false sense of delicacy or a needless sense of despair may often have been the deterrents, but a greater deterrent has been the lack of scientific backing which an organized and educated professional opinion might supply. Neither general practitioner nor consultant has yet appreciated how much greater his contribution to preventive medicine might be. Few things would better serve to correct the loss of prestige which we have sometimes suffered as a profession, in one way and another, whether fairly or unfairly, than an openly expressed willingness to serve the community in new ways and to teach the fundamental principles of health and healthy breeding and their supreme importance to the family and the race, a willingness also to consider a concerted programme for the training of students and doctors in their new rôle as educators of the public in these principles.

With recognition of these new functions the voluntary system would remain undisturbed. the co-operative principle would have free scope, and both the individual approach in the home or the consulting-room and state-aided organization could play their respective parts. We could also, I feel confident, expect in due course the intelligent co-operation of existing health organizations, of the press, of the accredited broadcast lecturer and of the public.

### *The Medical Curriculum*

And now I pass to that vexed question—approached by no medical educationalist without a sigh—the medical student's curriculum. I need not remind you of the trouble which this has given us and of the numerous committees which have met to consider it in recent years. With a minimum of six years necessary for qualification and a syllabus already overloaded with subjects to a scarcely supportable degree it would seem folly to suggest the addition or expansion of yet another subject. With jealous insistence the various sciences and specialisms have put their several obstructions in the way of curtailing the time allotted to their subjects, and new specialisms have tried to find a footing. Fundamental though they be, how shall we find more room for instruction and examination in animal and human genetics in the pre-clinical period or for a review of the principles and possibilities of eugenics and of the other domestic or sociological contributions to preventive medicine in the clinical period of the student's career? How can we secure a fuller recognition of the far larger preventive rôle which medicine could and should be playing?

In this regard, Lord Horder, our President, has again hinted wisely that room should be made in the curriculum by the omission of less important studies. At present there is no systematic reference to or instruction in the grammar of genetics after the first year of study. Of what is taught then the greater part is forgotten before the beginning of the clinical period. Animal genetics might well replace more of the routine morphological study in zoology. Reproduction, genetics

growth and nutrition might surely command some of the time allotted to the more specialized biochemistry and biophysics which now loom largely in the field of physiological study. Elaborating and refining the ancillary sciences we stand to-day in danger of forgetting Man in the education of students who will have to devote the greater part of their lives to his study. Scientific education is becoming analysis without synthesis. There is a real danger that extensions of the newer tissue-chemistry or retention of an excess of special anatomy may serve to exclude some of those larger essentials of mammalian structure and physiology which preserved the human interest of earlier teaching.

It would be reasonable to replace some of the test-tube work—appropriate enough for the non-medical physiologist—by broader, if at present less detailed, studies in nutrition and endocrinology and human inheritance, all of which find apt and frequent illustration in the clinical field and some aspects of which can be successfully demonstrated by animal experiment. Mendelian principles, sex-linked abnormalities and other phenomena can be explained with certain human diseases as well as with plants and animals, and there is no reason why the demonstration should be entirely reserved for the student in the clinical period. Constitutional variations abound and should be susceptible of closer study. Their importance in clinical medicine is everywhere apparent. More than fifty years ago Nathan Hutchinson told us that “we neglect unwisely the study of those differences between man and man of which, for the most part, physiology takes no cognizance, but which may yet prove of much importance in studying the processes of disease.”\* Might not both anatomy and physiology begin to take more frequent cognizance of these differences between man and man for the benefit of medical students and their future patients? Some of the commonest mistakes in medicine depend upon the prevailing lack of knowledge among doctors, both young and old, of what is best described as normal

variability. In the clinical period bacteriology for a time usurped too much of the field, with the result that the seed has been studied to the neglect of the soil. In the wards the “interesting case” has been employed too much for teaching, and elaborations of diagnostic method rather than frequent references to the ætiology, natural history and preventability of common diseases have been the accepted custom of the bedside talk.

Briefly, I should like to see genetic principles given fuller consideration from the first year of biological study and continued in proper proportion and with appropriate illustrations until the final clinical year, and the various other means and possibilities of prevention in medicine more frequently stressed at all stages. In the student mind “public health” savours too much of drainage systems and by-laws and is still too commonly regarded as something to be relegated to the M.O.H. Ideally every doctor should regard himself as an active participator in the general preventive scheme, and, indeed, with eugenic and hygienic advice, a more generous intimacy with the public mind and needs, and more frequent representations to employers and the public authority, he could contribute to it far more liberally than he does at present.

### *Post-graduate Instruction*

Let us next consider how interest in human genetics could better be fostered in the profession as a whole. Here it seems to me that the *Eugenics Society*, by making new and wider contacts with the medical societies of the country, might play a helpful and important part, even while we wait and plan for larger developments. If these societies, or a proportion of them, could be persuaded of the value of at least one lecture or discussion a year on the various aspects of positive and negative eugenics, and if an offer of speakers could be made when none could be provided locally, an awakening of interest would soon follow. In any case, such a plan would be more likely to achieve practical results than lectures to the laity. In certain instances the medical societies

\* *The Pedigree of Disease*, London, 1884.

might think the occasion suitable to invite lay persons to their meetings, and thereby help to establish the principle of free intercourse and co-operative concern in matters of obvious social and national importance. The imputation of aloofness has not been altogether undeserved by our profession.

In considering the help which eugenic organizations might give to the doctors, we must also have regard for the services which the doctors might render in return. If a group of local societies undertook to pool the information accessible to their members and relating to dysgenic agencies recognizable in daily practice, or to start a collection of family histories in connexion with known heritable diseases and constitutional liabilities, information of value alike to human genetic science and to health propaganda could be steadily accumulated. Out-patient clinics at some of the larger hospitals to be devoted to heritable disease, constitutional disorders and the provision of eugenic prognosis and advice might also give good service.

Let us freely admit that physicians have made many and valuable contributions to human genetics, particularly in connexion with the study of certain rare diseases like hæmophilia, angioneurotic oedema and colour-blindness. The waste of valuable human information, nevertheless, remains one of the tragedies of practice.

Observational ability and historical aptitude are frequent in the profession, and with a more specific training could be applied to advantage. With no other apparatus than a good system of recording and indexing the observant family doctor could accumulate through the years important observations bearing upon many problems of constitutional defect and heritable disease.

Let us also remember that medicine has much to say on the dysgenic influences of war and of present defects in our industrial organization, and should say it more often. When the fear of war and economic crises has receded it will become easier, but even more imperative, for us to advise many who have the necessary health and means but are at present declining parenthood that the

state and their own health and happiness would be better served by a minimum contribution of three children.

In 1934, under Dr. C. P. Blacker's editorship, a pioneer book was published entitled *The Chances of Morbid Inheritance*. In his introduction to this book Sir Humphry Rolleston wrote as follows:

"The accuracy with which medical men could give eugenic prognoses would be greatly enhanced and the scope of preventive medicine much extended by a more active interest on the part of the medical profession as a whole—those in general practice who have the most ample opportunities, Medical Officers of Health, and consultants with a special knowledge of genetics. Much could be done by their co-operation in the collection and analysis of information, and one of the chief objects which the *Eugenics Society* has in presenting this book is to bring about this much-needed collaboration of the medical profession."

I suggest that this much-needed collaboration must also be sought in other ways. The keeping of pedigrees by doctors themselves and, with their encouragement, by intelligent families well known to them, and the formation of groups and clinics, for studying what Jonathan Hutchinson called the pedigree of disease, commend themselves as possible developments. While mental defect and the "carrier" problem will be investigated by those endowed with special training, facilities and aptitude—I have in mind such workers as Lewis, Lidbetter and Penrose in this country—it should be possible, for a medical society, by means of a Pedigree Subcommittee, to prosecute an investigation, shall we say, of the familial incidence of the accepted allergic diseases, and of peptic ulcer, goitre, hyperpiesia and the psychoneuroses. In all such inquiries the *Eugenics Society* could give valuable help in respect of the methods of recording, the preparation of pedigrees, and the analysis of results.

### Research

There remains another pathway whereby progress must also be furthered—the pathway of particular research. Here I would advocate a strictly limited number of research chairs or readerships in human genetics. The

number at first should probably not exceed two or three in the whole country and the posts should be filled only if men of outstanding promise were forthcoming. A training in both medicine and genetic science should generally be considered necessary.

At Oxford and Cambridge generous schemes for the furtherance of medical research are now coming into being. In both places an appropriate atmosphere and the necessary contacts with the biological and clinical sciences and, through the hospitals and their follow-up departments, with the field of practice, are to be found, so that conditions should be particularly favourable for the establishment of research centres concerned with morbid inheritance in man. In my view it is essential that the academic and applied biological sciences should find their opportunities in close geographical proximity. The growing recognition of this principle in the older haunts of learning seems to me one of the most hopeful modern trends in scientific education and research. If human genetics could find a footing in close association with animal genetics and the biological sciences on the one hand, and with the clinical sciences on the other, the prospects of new advancement in all of these subjects would clearly be better assured than by any more isolationist policy. As a single example of a problem urgently inviting study the relative contributions of inheritance and nutrition to growth and stature may be cited.

The applied sciences having a direct bearing on human needs must, in the present century, and with no undue delay, be given every possible opportunity of development and service. Man has too long neglected the study of his own problems of existence and survival.

### *The Influence of the Society*

Dr. Blacker has recently drawn attention in the REVIEW to some of the eugenic problems needing research.\* One paragraph of his I should like to quote and amplify :

" I do not much reproach myself," he says, in reference to the Society, " that our membership

has increased but slowly. I believe that, largely through our activities, a eugenic conscience, stronger and more discriminating than ever before, exists in the country to-day. I believe, moreover, that our essential propaganda will be readily done for us by others if we can establish our contentions on scientifically solid grounds. Indeed, I doubt very much whether the " outward and visible " success of the Society will ever be commensurate with its *real* success. I would even go farther than this. *Real* eugenic results—the favourable influencing of the trend of births and the appropriate guidance of legislation—will not, I believe, be mainly attained through the publicly recognised agency of the Society ; they will rather be achieved by *other societies and organisations which our Society can influence.*"

Of the other bodies with which the *Eugenics Society* could seek co-operation I would particularly emphasize (in addition to the medical societies) the Royal Colleges and the Universities, for through these the trends of education, whether pre-graduate or post-graduate, and the encouragement of research are in the main determined.

### *Ultimate Planning*

Without a stirring of the eugenic conscience in medical students and doctors, I must repeat, we can scarcely hope to stir the eugenic conscience of the public effectively. It must still, however, be admitted that, with our present lack of co-ordination within the medical profession and our present reliance on local enthusiasm and sporadic individual efforts, progress in the various directions indicated must be slow. And so I cannot but ask myself whether we ought not to visualize in connexion with our special problems, and in fact with the whole problem of preventive medicine and the national health services, a more drastic reorganization and a bolder plan.

In industry and economics and in many other directions it has become customary to talk of " planning," but outside the Soviet Union we can nowhere perceive any large-scale endeavour to carry such planning to its logical conclusion. In Russia alone (if we are to accept the evidence of the Webbs, of Sir Arthur Newsholme and Professor Sigerist) is medicine being planned with the wide

\* October 1937, p. 181.

objects which we all in our hearts commend. I make no comment on the general method or prospects of Sovietism, but in Russia alone are the potentialities of an organized state medicine (with the emphasis always on prevention and embodying the principles of disinterested service and of full co-operation between prevention and practice, research and administration, doctor and patient) coming to realization.

With an end to unemployment ; with a gradual reduction in the hours of labour ; with equal payment of and opportunity for the sexes ; with sixteen weeks' holiday on full pay for the expectant mother ; with consultative clinics for recent or intending parents ; with a complete abolition of patent medicines and the evils connected with their sale and advertisement ; with a relationship between doctor and community only possible where fee-getting is no longer necessary ; with " five - year plans " for health administration in one district after another, and popular instruction in and campaigning for the reduction of epidemic disease ; with early marriage made possible and prostitution a vanishing profession, order is coming out of a chaos far worse than we have ever experienced in this country, and the achievements in only twenty years are, to say the least, remarkable. That there have been muddles and abuses, mistakes and failures, largely engendered by urgent situations and inexperience, we cannot doubt, but we would be ungenerous if we did not accept the simultaneous evidences of progress and some at least of the major lessons of this gigantic experiment.

In a recent epidemic emergency in this country the lack of co-ordination in our health services was a cause for comment. This same lack of co-ordination is, I believe, everywhere retarding the effective handling of other insidious and far more dysgenic agencies. Ought we to require an outbreak of streptococcal or typhoid fever or agitation about an industrial disease to remind us of all that is haphazard in the present evolution of our national medicine ? There is growing evidence in the United States as well as in this country that our colleagues are not

universally satisfied with the existing order.

In his contrast between the Soviet programme and existing Western modes, Sigerist says :

" . . . the systems of protecting the peoples' health are in all capitalist countries compromise systems. Medical service is given to the population by various agencies in various ways. Under capitalism, state medicine, insurance medicine, charity medicine, and private medicine exist side by side. The fight against disease is not led by one general staff but by a multitude of staffs, among which there is often very little co-operation. Even in countries that have established ministries of health, like England and France, the ministries do by no means control all the health activities of their respective nations. It is obvious that such systems necessarily have all the deficiencies of a compromise."

It may be that our policy of gradualism and educational measures alone will lead us sufficiently fast towards the goal we visualize. It may be, on the other hand, that we shall have to learn our lesson from the U.S.S.R., and be grateful for the experience and mistakes of that régime, but in the meantime we have no excuse for postponing the better education of the doctors and the public, and inviting the co-operation of both in our own " five-year plans " for human advancement.

A state medicine which does not embody, at any rate in its preventive code, many of the newer principles cannot with full success encompass the control of infectious and industrial disease, the nutrition and housing and health-education of the people, or indicate the conditions which make for a healthy fertility.

### *Conclusion*

Let us now briefly summarize the recommendations that have seemed to me immediately desirable.

First, I conceive that there should come into existence a national council embodying a triple alliance between medicine, eugenic and sociology, with representatives in each instance of the academic and the applied sciences, and appropriate contacts with the ministries and research departments of health, agriculture and labour. The function of this council would be the direction, in a

advisory capacity, of education and research in human genetics and social reorganization, on the one hand, and, on the other, the regular transmission to the legislative councils of the country of the information accumulated, with suggestions for reforms based thereon. In the preventive field such a council might stand in the same relationship to the Government as the Medical Research Council stands at present in regard to all the problems of medical research and its applications to practice.

Secondly, as a part of a general reform in medical education, modifications of the curriculum calculated to lay more stress upon all preventive aspects should be visualized. The preservation of health by nutritional and other social reforms and by applications of human and animal genetic studies to eugenic education and legislation should receive fuller emphasis, both in the pre-clinical and clinical periods. In the clinical period physicians should recognize a special duty in connexion with the teaching of the prophylactic aspects of medicine. "How could this have been prevented?" is a question which should occupy the thoughts of teachers and students far more frequently than it does at present.

I do not excuse my frequent references to nutrition, for we have increasing grounds for believing that undernourished mothers cannot make first-class babies and that undernourished children do not grow to first-class parents. Thus, although not inherited, subnormal diets come within Galton's category

of agencies which impair the racial qualities of future generations.

Thirdly, with the help of existing organizations, eugenic and sociological, an endeavour should be made to interest the doctors of the country, through their medical and scientific societies, in the preventive and educational rôle which they might themselves fulfil by instruction in domestic eugenics both positive and negative. The preservation of health as a primary function, with the treatment of disease as a secondary function, should become the new ideal.

Fourthly, a limited number of research chairs or readerships in human genetics, preferably to be held in universities where the medical and biological services already flourish side by side, should be established.

I hope it may seem to you that some of these suggestions are practical and possible, or at any rate that they are worthy of fuller consideration, and that with their fulfilment results might in time be achieved which can scarcely be hoped for with our present lack of a concerted policy or under any system of dictatorial compulsion.

In my own profession I believe that a host of willing collaborators could be found, but without the help and instruction and advice of the many pioneers and research workers in human, animal and plant genetics and in the eugenic field, they would indeed be helpless. Between us, by the means outlined, we could surely come to organize and invigorate the eugenic crusade in a manner which would have gratified its founder.